REMARKS

Claims 1-12 are pending in the subject application, and all of the claims stand rejected. By the above amendment, claims 1, 2, 5, and 6 have been amended. Favorable reconsideration of the application and allowance of all of the pending claims are respectfully requested in view of the above amendments and the following remarks.

Applicant timely claimed foreign priority under 35 U.S.C. §119 to German Application No. DE 103 09 266.8, and filed a certified copy of this foreign priority document on June 14, 2004. The USPTO's PAIR system confirms that the certified copy was received. **Accordingly, the Examiner is respectfully requested to acknowledge receipt of the certified copy in the next communication.**

Claims 1-12 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6.764,808 to Okoroanyanwu et al. Further, claim 1 stands rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Publication No. US 20030031956 A1 to Wijnaendts et al. Applicant respectfully traverses these rejections insofar as they apply to the amended claims.

Claim 1 sets forth a method of forming an opening in a light-absorbing layer on a mask, wherein two exposing steps are performed using first and second resist layers. In particular, claim 1 requires forming a first resist layer on the light-absorbing layer, and forming a second resist layer over the first resist layer. The second resist is exposed and developed such that a first opening is formed along a first segment of the second resist to uncover an area of the first resist. According to claim 1, a second exposure is then performed along a second segment that is laterally offset with respect to the first segment such that a portion of the second segment overlaps the first segment in a common overlap area and exposes only a portion of the first resist uncovered within the first opening of the second resist. A non-overlapping portion of the second segment is shaded by the second resist adjacent the first opening, and the exposed portion of the first resist in the common overlap area is smaller than the first segment and smaller than the second segment. The first resist is then developed in the common overlap area to form a second opening which is smaller than the first opening, and the light-absorbing layer below the second

opening is etched to form the opening in the light-absorbing layer. Thus, claim 1 has been amended to clarify that the shading provided by the overlying second resist layer during the second exposure creates a common overlap area which is smaller than either of the first and second segments respectively produced by the first and second exposures. Support for these amendments can be found at least on page 8, line 12 to 18 of Applicant's specification and in Fig. 2.

Okoroanyanwu does not disclose or suggest these requirements of claim 1. Okoroanyanwu's disclosure focuses on transferring the pattern of a first resist layer into the pattern of a second resist layer in a self-aligned mask fashion. Okoroanyanwu teachings are directed at an integrated circuit fabrication process for patterning features at sub-lithographic dimensions. The process includes sequentially disposing photosensitive material and carrying out two exposing steps with different lithographic wavelengths. According to Okoroanyanwu, the exposure to the first lithographic wavelengths causes a self-aligned mask to form within the photo resist layer. During the first exposure step a photo mask is provided in order to generate a pattern on the uppermost photosensitive layer. During the second exposure step, flood exposing is used in order to transform the unmasked sections of the second photo resist layer in a self-aligned mask fashion (see column 5, lines 10 to 19 and Figure 7).

Okoroanyanwu fails to disclose or teach a second exposure which produces an opening in a resist in a common overlap area between first and second exposure segments of first and second respective exposures, wherein the common overlap area is smaller than the first and second exposure segments, as required by claim 1. In Okoroanyanwu, only the self-aligned mask is described, which permits transfers of the pattern of the first resist layer into the pattern of the second resist layer. There is no teaching in Okoroanyanwu to form an opening that is smaller than both the first and second exposure segments as a result of shading from the second (upper) resist layer, as required by claim 1. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection over Okoroanyanwu.

Wijnaendts also fails to anticipate claim 1. Wijnaendts discloses a lithographic process for producing microstructures wherein two exposure steps are carried out such that structures can

be produced which are smaller than the optical resolution of the system. This is achieved by successively transferring a pattern into a resist layer such that the structures being created during the first exposure step and the structures which are generated during the second exposure steps are carried out with the predetermined displacement which are situated in intermediate spaces formed between adjacent structures of the first set during the first exposure. Thus, Wijnaendts' scheme involves the subsequent exposure steps having the mask structures arranged such that the structures of the second set are situated between the structures of the first exposure stage.

This is in sharp contrast to the method of claim 1, which requires forming an opening in a common overlap area of first and second exposure segments involving first and second resist layers. Note that Wijnaendts teaches nothing equivalent to the claimed second resist layer overlaying a first resist layer, wherein the second resist layer shades a portion of the second exposure such that only the common overlap region is exposed on the first resist layer. Accordingly, claim 1 is not anticipated by Wijnaendts, and the Examiner is respectfully requested to reconsider and withdraw this rejection.

In view of the foregoing, Applicant respectfully requests the Examiner to find the application to be in condition for allowance with claims 1-12. However, if for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is respectfully requested to call the undersigned attorney to discuss any unresolved issues and to expedite the disposition of the application.

Applicant hereby petitions for any extension of time that may be necessary to maintain the pendency of this application. The Commissioner is hereby authorized to charge payment of any additional fees required for the above-identified application or credit any overpayment to Deposit Account No. 05-0460.

Respectfully submitted,

/PJF/
Patrick J. Finnan
Registration No. 39,189

EDELL, SHAPIRO & FINNAN, LLC
1901 Research Boulevard, Suite 400
Rockville, Maryland 20850-3164
(301) 424-3640

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